(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 10 February 2005 (10.02.2005)

PCT

(10) International Publication Number WO 2005/011391 A2

(51) International Patent Classification7:

A23D

(21) International Application Number:

PCT/US2004/025011

(22) International Filing Date: 2 August 2004 (02.08.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:
60/492,160 31 July 2003 (31.07.2003) US
60/525,914 30 November 2003 (30.11.2003) US
10/750,457 31 December 2003 (31.12.2003) US
60/546,397 21 February 2004 (21.02.2004) US

(71) Applicant (for all designated States except US):
CARGILL, INCORPORATED [US/US]; 15407
McGinty Road West, Wayzata, MN 55391 (US).

(72) Inventors; and

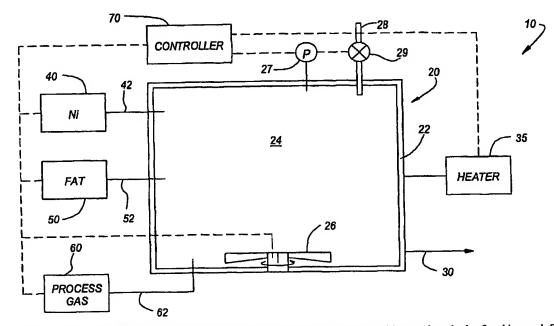
(75) Inventors/Applicants (for US only): VAN TOOR, Hans [NL/NL]; Albast 35, NL-2719 TV Zoetermeer (NL). VAN

ROSSUM, Gijsbertus, Johannes [NL/NL]; Dingna Johannaweg 117, NL-3193 PE Hoogvliet (NL). KRUIDEN-BERG, Marco [NL/NL]; Voorweg 58, NL-3233 SL Oostvoome (NL).

- (74) Agents: HOTCHKISS, Edward, S. et al.; Perkins Coie LLP, P.O. Box 1247, Seattle, WA 98111-1247 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: LOW TRANS-FATTY ACID FATS AND FAT COMPOSITIONS AND METHODS OF MAKING SAME



(57) Abstract: This disclosure describes select low *trans*-fatty acid fats and fat compositions and methods of making such fats and fat compositions. These fats and fat compositions achieve properties commonly associated with typical partially hydrogenated fats, but avoid the high *trans*-fatty acid contents typically associated with such fats.

0005/011391 A2

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 10 February 2005 (10.02.2005)

PCT

(10) International Publication Number WO 2005/011391 A3

- (51) International Patent Classification: *C07C 51/36* (2006.01)
- (21) International Application Number:

PCT/US2004/025011

- (22) International Filing Date: 2 August 2004 (02.08.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/492,160 31 July 2003 (31.07.2003) US 60/525,914 30 November 2003 (30.11.2003) US 10/750,457 31 December 2003 (31.12.2003) US 60/546,397 21 February 2004 (21.02.2004) US

- (71) Applicant (for all designated States except US): CARGILL, INCORPORATED [US/US]; 15407 McGinty Road West, Wayzata, MN 55391 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): VAN TOOR, Hans [NL/NL]; Albast 35, NL-2719 TV Zoetermeer (NL). VAN ROSSUM, Gijsbertus, Johannes [NL/NL]; Dingna Johannaweg 117, NL-3193 PE Hoogvlict (NL). KRUIDEN-BERG, Marco [NL/NL]; Voorweg 58, NL-3233 SL Oostvoorne (NL).
- (74) Agents: HOTCHKISS, Edward, S. et al.; Perkins Coie LLP, P.O. Box 1247, Seattle, WA 98111-1247 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, WM, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 8 September 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LOW TRANS-FATTY ACID FATS AND FAT COMPOSITIONS AND METHODS OF MAKING SAME

(57) Abstract: This disclosure describes select low *trans*-fatty acid fats and fat compositions and methods of making such fats and fat compositions. These fats and fat compositions achieve properties commonly associated with typical partially hydrogenated fats, but avoid the high *trans*-fatty acid contents typically associated with such fats.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/25011

A. CLASSIFICATION OF SUBJECT MATTER IPC: C07C 51/36(2006.01)			
USPC: 554/141,147 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S.: 554/141, 147			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST, CASONLINE			
C. DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim No.	
Category * Citation of document, with indication, where apply X US 4,696,911 (BOERMA et al.) 29 September 1987 (propriate, of the relevant passages	1-2 and 4-20	
Further documents are listed in the continuation of Box C.	See patent family annex.	· · · · · · · · · · · · · · · · · · ·	
Special categories of cited documents: "A" document defining the general state of the art which is not considered to be	"T" later document published after the Inte date and not in conflict with the applic principle or theory underlying the inve	ention but cited to understand the	
of particular relevance "E" earlier application or patent published on or after the international filing date	document of particular relevance; the considered novel or cannot be considered when the document is taken alone	claimed invention cannot be red to involve an inventive step	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the considered to involve an inventive ste combined with one or more other suching obvious to a person skilled in the	h documents, such combination	
"O" document referring to an oral disclosure, use, exhibition or other means	-&" document member of the same patent		
"P" document published prior to the international filing date but later than the priority date claimed			
Date of the actual completion of the international search 26 June 2006 (26.06.2006)	Date of mailing of the international search report 14 JUL 2005		
Name and mailing address of the ISA/US	Authorized officer	enth P-	
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450	Deborah D. Carr 7- Roberts for Telephone No. (571) 272-1600		
Facsimile No. (571) 273-3201			

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/25011

Box No. II	Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)		
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:			
1.	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:		
2.	Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:		
3.	Claims Nos.: 23-29, 35-39, 44-49 AND 54-60 because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).		
Box No. II	Observations where unity of invention is lacking (Continuation of item 3 of first sheet)		
This Internat	ional Searching Authority found multiple inventions in this international application, as follows:		
1.	As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.		
3.	As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:		
4.	No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:		
Remark or	payment of a protest fee. The additional search fees were accompanied by the applicant's protest but the applicable protest fee		
	was not paid within the time limit specified in the invitation. No protest accompanied the payment of additional search fees.		
1	. To process accompanies are pay		

Form PCT/ISA/210 (continuation of first sheet(2)) (April 2005)